

US EPA ARCHIVE DOCUMENT

**State Innovation Grant Project
Narragansett Bay Commission
Progress Report - 8
July 1, 2010 – September 30, 2010**

Project Title: Sustainable Energy Management Practices for Wastewater Treatment Facilities

Part 1 – Synopsis of Accomplishments

During the current Project Reporting Period July 1st through September 30th, 2010 the following activities took place: the Project Partners (NBC, RIDEM, URI and RIMES) and EPA continued to meet and participate on conference calls to discuss and plan activities associated with project development and implementation, an EF-EMS Roundtable Meeting was held on September 23rd, UV disinfection power efficiencies for 3 RI WWTFs were evaluated based on available data, information was compiled to assist in the evaluation of the conceptual feasibility of hydroelectric power generation at 4 POTWs, a summary of nitrogen and other discharge limits for all 19 WWTFs was compiled, NBC continued collecting energy use data from RI WWTFs for benchmarking, work continued on investigating the potential use of biodiesel glycerin as a wastewater treatment carbon source, and URI, RIDEM and NBC developed a FOG-ERP Informational Brochure.

Part 2 – Summary of Activities Accomplishments – Seventh Project Quarter

I. WWTF Energy Focused Environmental Management System Project

EF-EMS Planning

EF-EMS Steering Committee

Throughout the current Project Period the EF-EMS Steering Committee continued to coordinate additional funding efforts with Mr. Ken Payne of the Rhode Island Office of Energy Resources (RIOER). During this time period Mr. Payne confirmed his office's commitment to help secure \$95,000 in additional grant funds to pay for ½ of the Technical Assessment phase of the WWTF energy audit process (National Grid has agreed to pay the other ½ of the cost). Funds are expected to become available in November. The Rhode Island EF-EMS Steering Committee will continue working with the RIOER to help secure these needed funds.

WWTF Energy Audits

On Thursday, September 30, 2010; as part of a RIDEM's quarterly POTW Supervisor's meeting, Eric Struder of DMI presented an update on EF-EMS Energy Use Audit (Scoping Studies) activities. To-date Scoping Studies have been conducted and subsequent reports have been prepared for 18 of the 19 Rhode Island WWTFs (Woonsocket was completed prior to start of the EF-EMS Program):

Facility	Date	Energy Team Leader
Jamestown WWTF	July 1, 2009	Action Energy
Narragansett WWTF	July 14, 2009	Action Energy

Facility	Date	Energy Team Leader
(Scarborough)		
Bucklin Point WWTF	July 22, 2009	Action Energy
QPDC WWCP	August 25, 2009	NBC
Burrville WWTF	February 23, 2010	DMI
Smithfield WWTF	March 10, 2010	DMI
Cranston WWTF	March 24, 2010	DMI
South Kingstown	April 7, 2010	DMI
Quonset Point	April 21, 2010	DMI
Newport	April 28, 2010	DMI
Warren	May 5, 2010	DMI
East Greenwich	May 12, 2010	DMI
Bucklin Point	May 19, 2010	DMI
Jamestown	May 26, 2010	DMI
Westerly	June 9, 2010	DMI
West Warwick	June 16, 2010	DMI
East Providence	July 8, 2010	DMI

EF-EMS Roundtable Meetings

On Thursday, September 23, 2010, NBC's Pollution Prevention Engineer organized a tour as part of the EF-EMS Roundtable allowing 15 people to visit a 1.65 MW wind turbine at Falmouth WWTF and Otis Air National Guard Base in MA.



Hydroelectric Renewable Energy Applications

Throughout the current Project Period, NBC's Pollution Prevention Engineer compiled information on the Field's Point, Cranston, West Warwick and Woonsocket WWTFs to help develop a feasibility assessment on the potential use of renewable hydroelectric power.

II. FOG Environmental Results Program Project

Biodiesel/Glycerin

In response to a request from the NBC's Bucklin Point (BP) WWTF, investigations were initiated into the feasibility of shipping a glycerin by-product from the production of biodiesel to the BP

WWTF for use as a carbon source within the BNR process. Efforts associated with this project conducted during this reporting period include:

On August 31, 2001 NBC received a letter from RIDEM authorizing NBC to accept glycerin generated as a by-product of biodiesel production for use at the Bucklin Point WWTF as a carbon source within the de-nitrification process.

During the month of September 2010 NBC's Environmental Monitoring and Technical Assistance Section initiated base line monitoring of Bucklin Point secondary treatment process in preparation of addition of the glycerin to the de-nitrification portion of the treatment process (these monitoring activities are not being funded through this grant award).

Part 3 – Projection of Activities, Accomplishments, and Major Expenditures for Next Quarter Report

I. WWTF Energy Focused Environmental Management System Project

- A Roundtable Meeting will be planned for November/December, 2010
- Continue with Energy Use Assessments in cooperation with National Grid

II. FOG Environmental Results Program Project

- FOG-ERP scheduled meeting the RI Hospitality Association
- FOG-ERP Steering Committee – Form Steering Committee and schedule first meeting
- ERP Certification – Finalize Workbook and Certification procedures

Part 4 – Financial Report

MBE/WBE

On September 23rd a MBE/WBE report for the SIG Grant Project period October 1, 2009 through September 30, 2010 was completed.

Project Expenses

A summary of grant related expenses to-date is as follows:

	Salary	Fringe	Non-Classified Limited	Total Personnel	Operating	Travel	Overhead Expenses	Match Funds	Grant Funds
NBC	\$64,516	\$35,484		\$100,000				\$50,000	\$50,000.00
RIDEM									\$0.00
RIMES				\$14,850					\$14,850.00
URI	\$102,835.03	\$23,364.90	\$11,411	\$137,611.32	\$70.00	\$1,951.53	\$35,367.17	\$33,512	\$175,000.02
Total:				\$252,461.32	\$70.00	\$1,951.53	\$35,367.17	\$83,511.88	\$239,850.02

Attachments:

1. Project Milestone Summary Table
2. September 2010 Roundtable Agenda
3. MBE/WBE Report
4. FOG ERP Brochure